Preparing the Sweble Hub Software for the Cloud

Summary

The Sweble Hub software is a wiki-like web application for knowledge management and end-user programming. Our ambitious goal is to be able to host the entire English Wikipedia as a project that can be forked by other users in the same manner that allows GitHub users to fork other user's repositories. We believe that this workload can only be managed by a microservice-based application that can be distributed over datacenters around the world. The goal of this thesis is to investigate the required technologies, slice the Sweble Hub software into microservices and demonstrate a running prototype.

Work Results

- Literature review
  - A list with relevant technologies is compiled and each item is evaluated for its suitability.
  - A review of literature on microservice-based architectures.
- Design and implementation
  - It is shown how the Sweble Hub software can be sliced into microservices.
  - The Sweble Hub software is sliced into at least three of the proposed microservices.
  - A cloud is set up (our servers or AWS, etc.) in which the scaling out, continuous delivery and metric collection capabilities are demonstrated.
- Thesis results
  - A comprehensive literature review.
  - Documentation on the proposed microservices of the Sweble Hub software.
  - Cloud deployment with at least three microservices and the aforementioned capabilities.

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Read the description on UnivIS

Technology Selection Criteria

- Mature projects
- Open source with suitable license (Apache, LGPL, etc.)
- Supports continuous delivery
- Based on dockerized microservices
- Runs on the big cloud providers (AWS, Azure, etc.)
- Does not rely on provider-specific features